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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 09/891,471 | 06/27/2001 | Masakazu Ogasawara | 041514-5130 | 1389 |
| 55694 | 7590 | 03/06/2006 | EXAMINER | |
| DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209 | | | PSITOS, ARISTOTELIS M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2656 | |
| DATE MAILED: 03/06/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/891,471 | OGASAWARA ET AL. |
| | Examiner | Art Unit |
| | Aristotelis M. Psitos | 2656 |

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 January 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,7 and 8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/2/05 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a range of 10-50 micrometers squared does not reasonably provide enablement for the newly introduced range of less than 50 micrometers squared, i.e., there is a lower limit as disclosed which is not encompassed by the newly introduced (amended) claims. It is noted that the proper range is recited in claim 8.

Response to Arguments

With respect to the 1 12 rejection, the examiner maintains the rejection under 1 12. As filed and disclosed the/a lower limit is identified. However, as recited in the claim, there is no lower limit identified (presumably less than 10 μm). Hence the scope of the claim is not commensurate with the disclosure. As stated above, the proper range is recited in claim 8. As noted by applicants' their claim is written broadly. In of itself, such is not necessarily defective. However, when attempting to define the scope of the claim with the specification as filed, the problem arises.

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As far as the claims are interpreted, the following rejections are made.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1,7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa et al further considered with Ichimura et al both further considered with EP 0814465 and all finally considered with Hector et al..

The references to Yamakawa et al and Ichimura et al are relied upon for the reasons of record.

The newly cited EP document, provided by applicants, relate to equations known to those of ordinary skill in the art relating ct (cross talk) with various parameters – see page 4, starting at line 2 to page8 line 46. With respect to claim 7, the examiner concludes that such a desired result (3%) or lower distortion is yielded from the above noted dimensions for the normalized detector.

It would have been obvious to modify the base system of Yamakawa et al and Ichimura et al with the above parameters disclosed in the EP document and derive the recited formula.

The claim has now been amended to include a particular range for the spacer. Such a range is well known and is taught by the Hector et al reference –see col. 3 lines 60-63.

It would have been obvious to modify the above-modified system with such a teaching, motivation is to use/take advantage of already defined thickness ranges established in the prior art. Such modification permits the manufacturer to save valuable resources in experimentation with undefined ranges.

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Response to Arguments

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot for the new grounds of rejection as stated above and additionally for the following reasons.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, applicants argue that modification of the NA of the base reference would be inconsistent with that of the range disclosed in Yamakawa due in part to applicants' decision of narrowing the range predicated upon

"the basis of the focus-servo capture range and interlayer crosstalk in the pickup device with the optics having a NA of 0.85 or more".

In response to this, no such requirement is found in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, the examiner has provided reasoning as to why such a variation in NA would flow from the references.

Again, the examiner is not persuaded. The passages noted by applicants and reviewed by the examiner lead the examiner to conclude the sizes mentioned,(see for instance at column 18, lines 4-21: 16, 10,4 and 2 μm is the measurement along one axis, either the x or y axis, and that in order to yield applicants' claimed squared parameters (μm) , one would multiple two dimensions. That is the examiner interprets the detectors as squares having both their x and y axis the same value – such as 16,10, 4 or 2 or 6, or 8 μm would yield values appropriately – 256, 100, 16, 4, 36,64 (μm). Since these values overlap the claimed values and in keeping with *In re Peterson* (cited in previous OA), this argument is not persuasive.

Claim Rejections - 35 USC § 103

3. Claims 1,7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al further considered with either by Narahara et al or Ichimura et al all further considered with the EP 0814465 and finally all further considered with Hector et al.

The following analysis is made:

Claim 1

Nakano et al

A pickup device of an apparatus for recording or
reproducing information, by irradiation of a light beam,
to and from a multi-layered recording medium having a
plurality of recording layers laminated through spacer layers,

see the abstract, and
summary of the invention
figure 1

wherein each of said spacer layers of the multi-layered recording
medium has a thickness of 10 μm to 30 μm ,

see Hector et al, col.
3 lines 60-63

the device comprising:

an illumination optical system including an objective lens
for focusing a light beam onto any of said recording layers
of said multi-layered recording medium; and

in fig. 1 element 43
is the objective lens,
the medium is multi-layered

a detecting optical system including a photodetector for
receiving and photo electrically converting reflection light from
said recording layers of said multi-layered recording medium
through said objective lens;

in the above figure, the
detector is element 61
see figure 3 as well.

wherein said photodetector has a normalized detector size:
(B/B₀) of a size of 50 μm or lower, and

see col. 6 starting at
line 6

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wherein the normalized detector size (B/β) is given see EP document
by an equation of:
$$(B/\beta) = L / (f_0 / f_{ob})$$

wherein L denotes a size of one side of the photodetector,
 f_0 denotes a focal distance of the detecting optical system and
 f_{ob} denotes a focal distance of the objective lens,
wherein said objective lens has a numerical aperture NA value see.
of 0.85 or greater. refs. to
Narahara et al or Ichimura et al.

In the above Nakano et al system, the ability of having plural recording layered medium appropriately focused and subsequently detected is discussed – see col. 5 starting at line 18.

Furthermore, as also found in col. 6 lines 6 plus, the ability of sizing the detector accordingly is discussed – including the claimed “normalization” thereof.

It is the EP document to Takahashi describes the above claimed formulas as part and parcel of the subject matter known to those in this environment.

With respect to the ability of altering the NA, i.e., increasing such so as to decrease the spot size and thereby permit even denser recording capabilities is taught/discussed in the article by Narahara et al or the previously cited patent to Ichimura et al teach such a NA value in this environment for the desired increased disc capacity.

It would have been obvious to modify the base system of Nakano et al with the above teaching from either of these secondary references, motivation is as taught to increase the disc capacity.

With respect to the parameters discussed in the formula, again the EP document is relied upon for the reasons stated above.

It would have been obvious to modify the base system of Nakano et al/Narahara or Ichimura et al with the above mathematical parameters/relationships discussed in the EP document and derive the

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formula parameters recited. The examiner concludes that such is an exercise in mathematics, and obvious to one of ordinary skill in the art.

With respect to the newly inserted limitations focusing upon the thickness range for the spacer layers, such a range for spacers is known in this environment as further discussed by Hector et al, see col. 3 lines 60-63.

It would have been obvious to further modify the above reference with such an additional teaching, motivation is to take advantage of existing parameters known in the environment and hence reduce unwanted experimentation in developing new thickness ranges.

Response to Arguments

Applicant's arguments with respect to these claims have been considered but are moot in view of the new ground(s) of rejection. With respect to the dimensional limitations, the claimed range overlaps the range disclosed in the base reference. Since these values overlap the claimed values and in keeping with In re Peterson (cited in previous OA), the claimed limitations are considered obvious.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sako et al – see col. 4 lines 14-16 also disclose the particular range for the spacer element in this environment and could be used in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
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AMP

